

ABSTRACT OF THE DISCLOSURE

A wide variety of Fiber Bragg writing devices comprising solid state lasers are provided. The solid state lasers emit moderate peak-power output beams which are
5 suitable for efficient production of fiber Bragg gratings without causing embrittlement of the optical waveguide. These solid state lasers generate output beams with wavelengths of approximately 240 nm, in order to match the primary absorption peak in the ultraviolet range for a typical optical waveguide. In some embodiments, the solid state lasers comprise Ti:sapphire lasers which are tuned to produce fundamental
10 wavelengths which are frequency-multiplied. In other embodiments, the output beam of a Ti:sapphire laser is mixed with a harmonic beam from a pump laser. Some embodiments output the third harmonic of a fundamental beam.

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